

REMARKS

Claims 5 and 8-11 are pending in this application. By this Amendment, claims 5 and 8-10 are amended. The amendments introduce no new matter because they are supported by at least the claims as originally filed. Claims 6 and 7 are canceled without prejudice to, or disclaimer of, the subject matter recited in those claims. Reconsideration of the application based on the above amendments and the following remarks is respectfully requested.

The Office Action, on page 4, indicates that claims 10 and 11 recite allowable subject matter. Specifically, these claims are indicated as allowable if rewritten in independent form including all of the features of the base claim and any intervening claims. Applicants appreciate this indication of allowability. The amendments to claim 10, incorporating the subject matter of the base claim, are taken in view of this indication of allowability. As such, Applicants understand that claims 10 and 11 are placed in condition for allowance.

The Office Action, on page 2, rejects claims 5-9 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,966,930 to Hatano et al. (hereinafter "Hatano"). This rejection is respectfully traversed.

At the outset, Applicants note that claim 5 is amended to incorporate the subject matter of now-canceled claims 6 and 7.

With reference to, for example, Steps 41-64 and col. 10, lines 51-67 and all of cols. 11-12, the Office Action asserts that Hatano can reasonably be considered to teach an apparatus for evaluating the deterioration condition of a catalyst with all the features positively recited in claims 5, 6 and 7. The analysis of the Office Action fails for at least the following reasons.

Hatano teaches a catalyst deterioration-determining system for an internal combustion engine in which determination of the deterioration of the catalyst is carried out based on the output from an oxygen concentration sensor during execution of air/fuel ratio feedback

control (Abstract). A determination parameter is calculated by averaging values of an inversion period parameter measured over different diagnosis periods as the predetermined diagnosis period and the determination of deterioration of the catalyst is carried out based on the determination parameter (Abstract). Hatano performed a catalyst deterioration-determination by calculating an oxygen storage amount for the catalyst based on a time period from an inversion of an output of an oxygen concentration sensor located downstream of the catalyst to a subsequent inversion of the output of the oxygen concentration sensor based on an intake amount within the determined time period. Hatano teaches, as a measurement, only a determination of Cmax (maximum oxygen storage amount). Applicants' disclosure recognizes that when an evaluated deterioration condition of a catalyst references only Cmax at a sensor, there is a possibility that the oxygen storage capacity ("OSC") of the catalyst may not be completely used up. Therefore, in such system, accuracy of an evaluation of the deterioration condition of the catalyst is at question (see e.g., page 2, line 24 - page 3, line 3 of Applicants' specification. It is this shortfall (inaccuracy) that is among the objectives that the subject matter of the pending claims is intended to address.

Claim 5 recites, among other features, a controller that controls the internal combustion engine to change an air/fuel ratio of exhaust gas upstream of the catalyst when an integrated value becomes a third value, the integrated value being integrated until a second timing after the integrated value is reset at a first timing, the second timing being determined based on a determination result of the air/fuel ratio of exhaust gas downstream of the catalyst, wherein the integrated value indicates an integrated value of an intake air volume of the internal combustion engine. Hatano makes no determination based on such an integrated value, but rather makes its determination based on a measurement of Cmax with respect to a determination parameter calculated by averaging values of different periods.

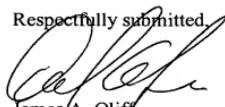
For at least this distinction, Hatano cannot reasonably be considered to teach, or to have suggested, the combination of all the features positively recited in independent claim 5. Further, claims 8 and 9 are also neither taught, nor would they have been suggested, by Hatano for at least the respective dependence of these claims directly on an allowable base claim, as well as for the separately patentable subject matter that each of these claims recites.

Accordingly, reconsideration and withdrawal of the rejection of claims 5, 8 and 9 under 35 U.S.C. §102(b) as being anticipated by Hatano are respectfully requested.

In view of the foregoing, Applicants respectfully submit that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 5, 8 and 9, in addition to the indicated allowable subject matter of claims 10 and 11, are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number set forth below.

Respectfully submitted,



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JAO:DAT/cfr

Attachment:

Petition for One-Month Extension of Time

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